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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,474	07/16/2003	Darwin Rambo	15019US01	8619

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EXAMINER
HAN, QI

ART UNIT	PAPER NUMBER
2626	

MAIL DATE	DELIVERY MODE
06/10/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/620,474	RAMBO ET AL.	
	Examiner	Art Unit	
	QI HAN	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 May 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *11-13,15-17 and 19-54* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-13,15-17 and 19-54* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Response to Amendment

2. This communication is responsive to the applicant's amendment dated 05/09/2007. The applicant(s) amended claim 11, cancelled claims 1-10, 14 and 18, added new claims 19-54 (see the amendment: pages 4-8).

The examiner withdraws the disclosure objection a. and b., because the applicant amended the corresponding content of the specification.

The examiner withdraws the previous claim rejection under 35 USC 112 2nd, because the applicant cancelled corresponding claims.

Response to Arguments

3. Applicant's arguments filed on 05/09/2007 with respect to the claim rejection under 35 USC 102 and/or 103, have been fully considered but are moot in view of the new ground(s) of rejection, since the amended and added claims introduce new issue, which changes the scope of the claims (see new ground rejection below).

Further, in response to applicant's argument with respect to claim 11 that Goodman "does not teach or disclose "receiving said reference speech samples captured at *one or more processing points within a gateway*" as claimed (see Remarks: page 9, last paragraph; wherein

emphasis in italics is denoted by the applicant), the examiner respectfully disagrees with the applicant and has a different view of the prior art teachings and the claim interpretations. It is noted that Goodman discloses gateway comprising codec (coder/decoder) (col. 4, lines 12-40), so that, at least, a processing point such as a codec in the gateway, can satisfy the claimed and argued limitation "one **or** more processing point within a gateway", based on broadest reasonable interpretation of claimed limitation in light of specification. Therefore, for at least above reason, the rejection is proper and the applicant's argument is not persuasive.

Claim Objections

4. Claims 19 and 30 are objected to because of the following.

Regarding claim 19, there are two separate recitations of "**a** communication system" before the limitation of "**said** communication system" in the second component of claim body, so that, it is unclear that to which one of the two antecedent bases the limitation is referred and/or what the relationship between the two antecedent bases really is. Appropriate correction or clarification is required.

Regarding claim 30, similar to claim 19, the limitation of "**said** communication system" in line 4 of the claim has two separate antecedent bases, so that it is unclear that to which one the limitation is referred and/or what the relationship between the two antecedent bases really is. Appropriate correction or clarification is required.

Claim Rejections - 35 USC § 102

5. Claims 11-12, 17, 19-20, 23, 27-31, 34, 36-37, 40-42, 47-49 and 52 are rejected under 35 U.S.C. 102(e) as being anticipated by GOODMAN (US 7173910 B2).

As per **claim 19**, as best understood in view of claim rejection under 35 USC 112 2nd, (see above), GOODMAN discloses 'service level agreements based on objective voice quality testing for voice over IP (VOIP) networks' (title) for 'a network-wise monitoring system' (col. 7, lines 3-5), comprising:

"a first voice analysis platform for transmitting a reference speech sample through a communication system"; (Figs. 1-2 and col. 3, lines 5-67, 'voice quality test probes 14a and 14b' 'store software algorithm implementing a perceptual or voice call listening quality test model', 'analyzes the voice quality of the recorded voice file (so interpreted as voice analysis platform)', and 'transmit …the reference voice files (speech sample) over the speech path within the VOIP network (communication system)', 'one test probe acts as a resource to transmit the file'); and

"a second voice analysis platform for receiving said reference speech sample transmitted through said communication system" (similarly, Figs. 1-2 and col. 3, lines 5-57, 'voice quality test probes 14a and 14b' 'store software algorithm implementing a perceptual or voice call listening quality test model (so as interpreted as voice analysis platform)' and 'receive the reference voice files (speech sample) over the speech path within the VOIP network (communication system)', 'a second test probe acts as a resource to receive the file transmitted'),

"said communication system comprising one or more signal processing elements used to process said reference speech sample", (Figs. 1-2 and col. 3, lines 12-27, 'gateway' and 'IP communication devices' (signal processing elements), col. 4, lines 12-

33, 'codecs' (signal processing elements) used by 'the VOIP communications device' including 'gateway' (can be interpreted as signal processing element or communication system)'),

"said first voice analysis platform or said second voice analysis platform receiving a selected output from a signal processing element of said one or more signal processing elements, said output used to compute a voice quality score" (Figs. 1-3 and col. 4, lines 3-17, 'when the analysis is complete, the test probe translates the difference into a PAMS score', 'the voice listening quality test is performed for each level of service as determined (selecting output from a signal processing element) by the type of codec (i.e., coder/decoder) that is used by the VOIP communication device that is performing the voice encoding and decoding operations'; col. 7, lines 12-22, 'all test probes in the network are configured and controlled by the manager' that 'stores the consolidated information in a database for analysis'; col. 7, lines 30-60, 'supports a large number of VOIP Points (outputs) of Presence (VOIP POPs)'; col. 3, lines 28-29, 'the test probes also store a software algorithm implementing a perceptual or voice call listening quality test model', including 'Perceptual Analysis Measurement System (PAMS)' and 'Perceptual Speech Quality Measurement (PSQM)' that provide objective voice quality scores; it is noted that either the test probe or combination of the test probes and the manager can be read on the voice analysis platform).

As per **claim 20** (depending on claim 19), as stated above, GOODMAN discloses "said one or more signal processing elements comprises a codec" (see rejection for claim 1 above).

As per **claim 23** (depending on claim 19), GOODMAN further discloses "said one or more signal processing elements comprises a packetizer" (col. 1, lines 8-26, 'packet-based network' 'voice over IP (VOIP) network', Figs.1-2, wherein 'VOIP gateway' necessarily or inherently comprises a packetizer, since its output directly connected VOIP network, i.e. packet-based network).

As per **claims 27-28** (depending on claim 19), as stated above, GOODMAN discloses the corresponding voice quality score comprising "PAMS" (for claim 27) and "PSQM" (for claim 28) (col. 3, lines 28-29, see rejection for claim 1 above).

As per **claim 29** (depending on claim 19), GOODMAN further discloses:

"said first voice analysis platform comprises a software module, said software module comprising software that provides configuration data to a gateway" (col. 3, lines 32-36, col. 4, lines 12-33 and col. 5, lines 4-5, 'test probes store a software algorithm (software module) implementing a perceptual or voice all listening quality test model' that 'is performed for each level of service' based on 'both codec (signal processing element) and IP signaling protocol (configuration data)' corresponding to one of the assigned unique telephone numbers (also read on configuration data in broad sense) that is called (provided) to a gateway; also see Figs. 1 and 4),

"said gateway comprising one or more signal processing elements" (col. 4, lines 1218, 'codec (i.e. coder/decoder) (interpreted as one or more signal processing elements)' used by 'VOIP communication device' such as 'gateways' that implement one or more coding schemes (also read on signal processing elements) to support voice encoding/decoding'; Fig.4, wherein

the data (telephone#, service level (or protocol) and routing info.) in the gateway configuration table can also be read on configuration data or signal processing elements),

"said configuration data used in determining said selected output from one or more outputs corresponding to said one or more signal processing elements" (col. 5, lines 17-25, 'gateway is configured with resources to perform both types of coding and signaling (configuration data)', 'the gateway 16a determines from the service level information associated with the called phone number (selected outputs)').

As per **claim 11**, it recites a method. The rejection is based on the same reason described for claim 19, because it also reads on the limitations of claim 11.

As per **claim 12** (depending on claim 11), GOODMAN further discloses "displaying said voice quality scores graphically" (col. 4, lines 10-11).

As per **claim 17** (depending on claim 11), GOODMAN further discloses "a voice over IP gateway" (col. 3, line 60).

As per **claim 30**, the rejection is based on the same reason described for claim 19, because it also reads on the limitations of claim 30.

As per **claims 31, 34, 36-37 and 40** (depending on claim 30), the rejection is based on the same reason described for claims 20, 23 and 27-29 respectively, because they recite the same or similar limitations as claims 20, 23 and 27-29 respectively.

As per **claim 41**, it recites a method. The rejection is based on the same reason described for claim 19, because the claim recites the same or similar limitation(s) as claim 19.

As per **claim 42** (depending on claim 41), the rejection is based on the same reason described for claim 12, because the claim recites the same or similar limitations as claim 12.

As per **claims 47-48** (depending on claim 41), the rejection is based on the same reason described for claims 27-28 respectively, because they recite the same or similar limitations as claims 27-28 respectively.

As per **claims 49 and 52** (depending on claim 11), the rejection is based on the same reason described for claims 20 and 23 respectively, because they recite the same or similar limitations as claims 20 and 23 respectively.

Claim Rejections - 35 USC § 103

6. Claims 21, 25, 32, 39, 50 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over GOODMAN in view of HOUH et al. (US 2002/0016937 A1).

As per **claims 21 and 25** (depending on claim 19), GOODMAN does not expressly disclose the signal processing element(s) comprising "a voice activity detector (VAD)" (for claim 21) and "a comfort noise generator (CNG)" (for claim 25). However, the feature is well known in the art as evidenced by HOUH who discloses 'method and apparatus for unitizing a network processor as part of a test system' (title), comprising that 'a gateway is equipped with standard interfaces' and 'the necessary encoding/decoding, …voice activity diction (read on voice activity detector) comfort noise generation (read on comfort noise generator) and packetizing/depacketizing are performed by the gateway' (p(aragraph)39), and using 'Perceptual Speech Quality Measurement (PSQM)' (p55). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify GOODMAN by providing signal processing element(s) comprising VAD and/or CNG with suitable testing measurement

such as PSQM, as taught by HOUH, for the purpose (motivation) of providing a variety of functions for testing a network environment and devices (HOUH: p11).

As per **claims 32 and 39** (depending on claim 30), the rejection is based on the same reason described for claims 21 and 25 respectively, because they recite the same or similar limitations as claims 21 and 25 respectively.

As per **claims 50 and 54** (depending on claim 11), the rejection is based on the same reason described for claims 21 and 25 respectively, because they recite the same or similar limitations as claims 21 and 25 respectively.

7. Claims 22, 33 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over GOODMAN in view of CONNOR et al. (US 6,999,560 B1) hereinafter referenced as CONNOR.

As per **claim 22**(depending on claim 19), GOODMAN does not expressly disclose the signal processing element(s) comprising "an echo canceller". However, the feature is well known in the art as evidenced by CONNOR who discloses 'method and apparatus for testing echo canceller performance' (title), comprising that 'the echo canceller 38 runs on the packet voice gateway 26 (signal processing elements)' (col. 1, lines 37-41) and providing 'perceptual speech quality measure (PSQM) (col. 7, lines 12-16). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify GOODMAN by providing an echo canceller on a signal processing element (such as a gateway) with appropriate testing measure (such as PSQM), as taught by CONNOR, for the purpose (motivation) of removing echo and/or more effectively testing echo canceller performance (CONNOR: col. 1, lines 35-36 and col. 2, lines 43-44).

As per **claim 33** (depending on claim 30), the rejection is based on the same reason described for claim 22, because the claim recites the same or similar limitation(s) as claim 22.

As per **claim 51** (depending on claim 11), the rejection is based on the same reason described for claim 22, because the claim recites the same or similar limitation(s) as claim 22.

8. Claims 24, 26, 35, 38, 46 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over GOODMAN in view of EL-HENNAWEY et al. (US 2004/0071084 A1) hereinafter referenced as EL-HENNAWEY.

As per **claim 24** (depending on claim 19), GOODMAN does not expressly disclose the signal processing element(s) comprising "a jitter buffer". However, the feature is well known in the art as evidenced by EL-HENNAWEY who discloses 'non-intrusive monitoring of quality levels for voice communications over a packet-based network' (title), comprising using 'a jitter buffer' in 'a receiving system' (p57). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify GOODMAN by providing a jitter buffer in a receiving system (signal processing element), as taught by EL-HENNAWEY, for the purpose (motivation) of allowing the receiving system to wait until packets in a desired sequence and/or monitoring for real time voice quality levels in live calls (EL-HENNAWEY: p57 and p5).

As per **claim 26** (depending on claim 19), GOODMAN does not expressly disclose the corresponding voice quality score(s) comprising "PESQ". However, the feature is well known in the art as evidenced by EL-HENNAWEY who further discloses using standards 'for objectively assessing the quality of speech' including 'PAMS', 'PSQM' and 'PESQ' (p35; also p51). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify GOODMAN by providing various standard speech quality measurements including PESQ, as taught by EL-HENNAWEY, for the purpose (motivation) of monitoring for real time voice quality levels in live calls and/or evaluating voice quality on an active call in a non-intrusive manner (EL-HENNAWEY: p5 and p8).

As per **claim 35** (depending on claim 30), the rejection is based on the same reason described for claim 26, because the claim recites the same or similar limitations as claim 26.

As per **claim 38** (depending on claim 30), the rejection is based on the same reason described for claim 24, because the claim recites the same or similar limitation(s) as claim 24.

As per **claim 46** (depending on claim 41), the rejection is based on the same reason described for claim 26, because the claim recites the same or similar limitations as claim 26.

As per **claim 53** (depending on claim 11), the rejection is based on the same reason described for claim 24, because the claim recites the same or similar limitation(s) as claim 24.

9. Claims 13, 15-16 and 43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over GOODMAN in view of BAUER et al. (US 2005/026189 A1) hereinafter referenced as BAUER.

As per **claim 13** (depending on claim 12), GOODMAN does not expressly disclose "displaying occurs by way of a graphical user interface". However, the feature is well known in the art as evidenced by BAUER who discloses 'methods and devices for correlating audio sample comparisons and network performance statistics' (title), comprising 'methods and devices evaluating audio (e.g. voice) quality in a network' and displaying the 'results' and 'statistics' 'in a user-friendly graphical user interface (GUI)' (paragraph (hereinafter referenced

as p) 6), and 'the information selected for display includes the PSQM score' (p44 and Fig.4). BAUER also teaches that the functionality provided by separate elements 'can be combined and/or integrated with the functionality of one or more of the other elements' and 'what is significant is the functionality provided by system (communication system)' (p15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify GOODMAN by providing GUI for displaying various information including voice quality scores and the related statistics, as taught by BAUER, for the purpose (motivation) of permit the user to more readily identify any degradation in quality and its cause (BAUER: p7).

As per **claim 15** (depending on claim 11), the rejection is based on the same reason described for claim 13, because the rejection for claim 13 covers the same or similar limitation(s) of claim 15.

As per **claim 16** (depending on claim 15), GOODMAN in view of BAUER further discloses "said statistical information comprises an average voice quality score and a variance" (BAUER: Fig. 4 shows the statistical information including 'average PSQM' and 'PSQM Std. Deviation (corresponding to equivalent measurement of variance)').

As per **claims 43-45** (depending on claim 41), the rejection is based on the same reason described for claims 13 and 15-16 respectively, because they recite the same or similar limitations as claims 13 and 15-16 respectively.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qi Han whose telephone numbers is (571) 272-7604. The examiner can normally be reached on Monday through Thursday from 9:00 a.m. to 7:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil, can be reached on (571) 272-7602.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Inquiries regarding the status of submissions relating to an application or questions on the Private PAIR system should be directed to the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028 between the hours of 6 a.m. and midnight Monday through Friday EST, or by e-mail at: ebc@uspto.gov. For general information about the PAIR system, see http://pair-direct.uspto.gov.

QH/qh
June 2, 2008

/Richemond Dorvil/
Supervisory Patent Examiner, Art Unit 2626